Clinical Note

Psychotherapy and Psychosomatics

Psychother Psychosom 1997;66:50–55

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Lucid Dreaming as a Treatment for Recurrent Nightmares

Key Words
Dream
Lucid dreaming
Nightmare
Imagery
Psychotherapy

Abstract

Background: Lucid dreams occur when a person becomes aware that he or she is dreaming while still in the dream state. Previous reports on the use of lucid dreaming in the treatment of nightmares do not contain adequate baseline data, follow-up data, or both. **Methods:** A treatment of recurrent nightmares incorporating progressive muscle relaxation, guided imagery, and lucid dream induction is presented for 2 case studies. Three other cases were treated with lucid dream induction alone. The duration of the nightmares ranged from once every few days to once every few months. **Results:** The procedures were effective in all 5 cases. A 1-year follow-up showed that 4 of the subjects no longer had nightmares and that 1 subject experienced a decrease in the intensity and frequency of her nightmares. **Conclusions:** The alleviation of recurrent nightmares in these 5 cases parallels the results reported by other authors who have used training in lucid dreaming to treat nightmares. Our results support the idea that treatments based on lucid dream induction can be of therapeutic value. Based on these and other case studies, it remains unclear whether the principal factor responsible for the alleviation of nightmares is lucidity itself, or the ability to alter some aspect of the dream.

Approximately 5–7% of adults report a current problem with nightmares [1, 2]. More recent studies indicate that the prevalence of nightmares may be considerably higher [3, 4]. Though the prevalence of recurrent nightmares has not been specifically investigated, their occurrence has been documented in a variety of individuals including otherwise normal clients [5, 6], victims of sexual assault or abuse [7, 8], psychosomatic patients [9, 10], and war veterans [11, 12]. Recurrent nightmares are also considered as a diagnostic sign of posttraumatic stress disorder [13]. In addition, many people who report frequent nightmares also report recurrent nightmares [14, 15].

Several authors have suggested that lucid dreaming may be clinically useful, particularly in the treatment of nightmares [16–18]. Lucid dreams occur when a person becomes aware that he or she is dreaming while still in the dream state. Some lucid dreamers report recall of events from their waking life (i.e., their memory remains intact), the ability to reason, and control of their dream bodies as desired. Furthermore, some lucid dreamers can change the dream scenery at will. Lucid dreaming is a learnable skill [19, 20] and it is now known that lucid dreams occur during unequivocal REM sleep [21, 22].

The use of lucid dreaming in the treatment of nightmares has been previously reported [18, 23–25]. However, the 2 case studies presented by Halliday [23, 24] do not contain follow-up data, and none of the 3 case histories presented by Tholey [18] contains baseline data and only one contains follow-up data. In this paper, we suggest mechanisms through which lucid dreaming may operate

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0033–3190/97/0661–0050$12.00/0

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to reduce the frequency and intensity of nightmares, describe how lucid dreaming was used to treat nightmares, and provide baseline and follow-up data for 5 case studies.

Lucid dreaming may operate through a number of mechanisms to achieve positive therapeutic outcomes. In his review of psychological therapies of nightmares, Halliday [26] suggested four distress-producing factors for nightmares: their believed importance, their dreadful and anxiety producing story line, their perceived realism, and their uncontrollability. By becoming lucid in one's nightmare, an individual may directly affect three of these four factors. Specifically, achieving lucidity within a nightmare can allow a client to: (1) alter the anxiety producing story line by consciously modifying the content of the nightmare; (2) realize that the experience is a dream and not a real event taking place in the physical world, and (3) choose the manner with which to respond to and interact with the dream imagery, thus reducing the nightmare's uncontrollability. Becoming aware during a nightmare that the experience 'is only a dream' may also reduce its perceived importance.

LaBerge and Rheingold [27] have suggested that expectations can play an important role in dream construction, so that what a person expects to happen next in a dream often influences or determines the manner in which the dream will unfold. It is possible that individuals who suffer from recurrent nightmares may be locked into a fixed way of responding to the nightmare's imagery and of anticipating what will happen next. This in turn leads the dreamer to reexperience the same threatening imagery. Lucid dreaming may provide recurrent nightmare sufferers with new responses and expectations concerning the nightmare's progression, thereby altering the repetitive nature of such nightmares.

Treatment

Subjects are first trained in progressive muscle relaxation [28]. Once subjects are relaxed, they rehearse (i.e., imagine) their recurrent dream in as much detail as possible while describing it to the therapist. The therapist guides this rehearsal, for example, asking about various elements in the dream or bringing particular details to the subject's attention. The subject then selects a part of the recurrent dream which is emotionally and/or visually salient, and during which he or she can imagine carrying out a particular task. The subject imagines performing this task in the dream while saying that he or she is dreaming. Later, during an actual dream, this action will cue that the experience is a dream. Typically, this task is as simple as looking at one's hands. Once the relaxation and imagery exercises have been completed, subjects are instructed to practice them at home, especially just before going to sleep.

The rationale for this treatment is as follows: by repeatedly rehearsing the recurrent dream together with a task which is intentionally carried out at a preselected salient point in the dream, the subject will remember to carry out the task when the recurrent dream occurs. The task serves as a prerehearsed cue to remind the subject that the experience is a dream. At this point, the subject is dreaming lucidly and can determine a different course for the dream content.

The therapist consults with the subject to find an appropriate way to modify the recurrent nightmare once lucidity is achieved. Various approaches include Garfield's [29] suggestion to 'confront and conquer' the feared scene, Halliday's [23, 24] suggestion to alter some small aspect of the dream, and Tholey's [18] suggestion to have the dream ego engage in conciliatory dialogue with hostile dream figures.

Case Reports

Three of the 5 subjects were referred by colleagues familiar with the authors' research interests. Two subjects were participants in a dream study who had expressed a desire to receive treatment for their nightmares. All met DSM-III-R criteria for the diagnosis of dream anxiety disorder (nightmare disorder). None of the subjects had received prior treatment for their nightmares nor had any been in psychotherapy. The subjects were instructed to keep a written record of any nightmares they had, as well as of dreams that they felt resembled any aspect of their nightmares, for a minimum of 5 weeks following the treatment.

Case 1. A was a 52-year-old Italian homemaker who came to Canada in 1957. She reported experiencing the same nightmare for over 20 years with a frequency ranging from once a week to once every several months. As a young child, during the second world war, she had witnessed several bombings. The nightmare consisted of being in her home in Canada when loud sirens were heard. She would begin to panic and to look for her 2 children. Finding herself in the kitchen, A would look through the window and see a bomber that appeared to be headed straight for her home. She would then hide beside the window while calling frantically for her children. The plane would stop by the kitchen window and the pilot would peer into the home looking for her and her children, presumably to kill them. At this point in her dream, she would wake up.

During the guided imagery, a target point in the dream was selected when A was to look at her hands. This was to occur at the moment in which the pilot looked into the window, since this was the most emotionally salient part of her dream. A discussion was then undertaken to determine what she would like to do in her dream if she

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became lucid. She decided that she wanted to confront the pilot and command the scenery to disappear. Because of the strength of A's religious convictions, she suggested that she use the phrase 'In the name of God, I command you to go away'.

Four weeks after the treatment, the subject twice experienced her recurrent nightmare. On the first occasion, the nightmare was experienced as usual. On the second occasion, A successfully remembered to look at her hands and became lucid. When she said 'In the name of God I command you to go away', the dream scenery shifted and she found herself in a church that she had attended in Italy. She reported that a powerful feeling of both joy and peace accompanied the change in dream content.

This client's progress was followed at 6-month intervals over a 2-year period. During this time, she did not have a recurrence of her nightmare, though three unrelated anxiety dreams were reported. In addition, she reported having had several lucid dreams which she described as being highly pleasurable.

One of her anxiety dreams is noteworthy in that a particular element of the treatment (i.e., looking at her hands) reoccurred, albeit in a different manner. In this dream, her brother's feet had somehow become stuck on a railway track. A train was quickly approaching and both the client and the dream character became extremely agitated. When the train was no more than a 100 m away, she raised her hands and yelled 'Stop!' At that moment, the train came to a halt and thus was prevented from hitting her brother. At no point in this dream did A realize that she was dreaming. She explained that she noticed her hands while trying to rescue her brother, and that something made her realize that her hands contained some sort of magic or power.

At a 4-year follow-up the client reported no further nightmares.

Case 2. B was a 43-year-old female who had quit her job due to major depression. The depression resulted from the suicide of her 21-year-old son, whose body she had found in the basement of her home. The depression had persisted for 2.5 years, and the client refused to take any medication for her condition. B also harbored intense feelings of guilt over not having 'felt' that her son's suicide was about to happen.

Over a 7- to 8-month period following this tragedy, B experienced frequent nightmares with varying content. These nightmares typically involved situations related to the suicide, such as finding her son's body or having the paramedics arrive. After 8 months, a particular nightmare began to recur to the exclusion of her other nightmares. The nightmare was reported as occurring once a week on average, and was sufficiently anxiety provoking to cause her to awaken. At the time of treatment, the nightmare had been occurring for close to 3 years.

The nightmare was described as follows: the client is in the living room of her home when she notices her son walking by on the sidewalk. She begins to yell his name and pound on the windows, but he does not appear to notice and continues walking. She then runs out into the street screaming his name, but her son is nowhere in sight. At this point, she wakes up.

During the guided imagery exercise, B recalled having sometimes seen a mansion in her dreams which was located near her own home but which did not really exist. When asked if she thought anyone lived in the mansion, she answered that she did not know but that maybe that was where her son was going. The suggestion was made that she might want to go into this house and find out who lived there. B agreed to this suggestion, and a target point in the dream was selected for her to become lucid. She was instructed to pay attention to her hands and to look at them when she found herself pounding on the windows in her dream.

During the 2nd week that followed the session, B reported having had her recurrent nightmare on 2 consecutive nights. On neither occasion did she become lucid. An interesting development occurred, however, on the 2nd night. After B had run out onto the street looking for her son, she noticed the mansion and remembered that she was supposed to see who lived there. She went up to the house and rang the doorbell. A beautifuly young lady wearing a white gown answered the door. B asked if her son was inside and the lady took her by the hand and led her to a room. At that moment, the lady spoke for the first time and said simply, 'Your son is in here'. B opened the door and found the room to be filled with white flowers. She was deeply moved and woke up shortly thereafter. It is interesting to note that B never actually became lucid in her dream. What she did do, however, was remember that it was important for her to go to the mansion.

B was contacted for a 6-month follow-up. She reported that since the 'white flowers' dream, she had not experienced any type of nightmare, nor had she ever become lucid in one of her dreams. A one-year follow-up showed that her depression had lessened, and that she was still free of nightmares.

The treatment reported in the previous 2 cases is eclectic, and contains approaches found in several other treatments. Although this treatment does not involve the standard procedure of formally constructing hierarchies of disturbing dream images, it nevertheless shares some similarities with desensitization and other behavioral procedures. Two controlled studies have demonstrated the therapeutic effectiveness of such approaches in treating nightmares [15, 30]. This technique also bears some resemblance to what Halliday [26] has termed story line alteration procedures, in which an attempt is made to change some aspect of the nightmare content, typically through waking imagery exercises. This approach has also been shown to be effective [31–34].

Given the findings described above, we cannot say which of the elements (or combinations) of our technique were most useful in alleviating the nightmares. To address this issue, the efficacy of lucid dream induction alone was assessed in 3 case studies, which are presented below. Progressive muscle relaxation was not used with these subjects, while guided imagery was used only insofar that they were asked to practice visualizing themselves becoming lucid in their nightmares and carrying out a prescribed task.

Case 3. C was a 35-year-old divorced woman who presented with a complaint of life-long nightmares. Since approximately the age of 16, her nightmares consisted primarily of dreams in which she was being chased by a mob who killed and mutilated everyone they caught. The client herself had never been caught by her pursuers and would wake up while hiding (e.g., behind buildings, barrels, or in wooded areas) with the mob closing in on her. The nightmares were reported as occurring from several times a week to once every 2–3 weeks. Because C would sometimes reexperience or 'continue' her nightmare when returning to sleep, she would often avoid falling back to sleep after awakening from a nightmare.

The most salient part of her nightmare was described as when she would be hiding, often with several mutilated corpses nearby. She was instructed to associate her hiding with the fact that she was dreaming and to imagine herself clenching her fists. C stated that she did not want to attack or kill her pursuers but rather try to talk to or confront one of her pursuers. Several strategies for interacting with these characters were discussed.

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That very same night the client had her nightmare but awoke early in the dream. The nightmare reoccurred the following week. In this dream, she was hiding when she heard one of the pursuers approaching. Though she did not realize that she was dreaming, she stepped out and yelled, 'I'm not going to hide anymore! Who am I?' Her pursuer replied in an enthusiastic tone that she was the person they had been looking for all this time and went to explain the geographical importance of the area. While he was talking, C heard someone yell 'Cut!' Looking around her she realized that she was on a large movie set, complete with cameras and lighting equipment. Her pursuer walked over to her, gave her a hug, and said, 'Good job'. C was somewhat confused and the movie director came over and talked to her about her acting, but she could not remember the details upon awakening.

A 6-month and 1-year follow-up showed that the client's nightmares had decreased in frequency, occurring once every 5–6 weeks. Moreover, the nightmares were described as being much less intense and frightening than they had been before the intervention, and they no longer involved dead or multilated bodies. In addition, C reported that she was no longer afraid of returning to sleep after awakening from a nightmare. At a 2-year follow-up the subject reported no further nightmares.

Case 4. D was a 22-year-old undergraduate who had a recurrent nightmare with a frequency ranging from once a month to several times per week. D had begun to experience her nightmare 16 months prior to treatment, following the accidental death of her uncle. In this nightmare, D arrives home from school and notices an ambulance in the driveway. In her house there is much commotion: people she does not know talking loudly and giving orders, her mother crying, and paramedics carrying a body on a stretcher covered by a white blanket. Oddly, one of the living room walls is dark red in color. She panics, asking people what has occurred, and someone mentions that her uncle is dead. She exclaims, 'It can't be! It can't be!' and runs upstairs. There she discovers other unknown characters who are passing various documents back and forth. At that moment, D runs back downstairs to see the body and talk to her mother, whereupon she awakens.

After she described her nightmare, D was told to form an association between the red living room wall and the fact that she was dreaming. She was also told to think of this association at night before going to sleep. If she became lucid during her nightmare, D was to close her eyes and imagine the living room wall being white (its true color) and to tell herself that the wall would be its usual color once she reopened her eyes in her dream.

One and a half weeks after the session, D had her nightmare and became lucid as soon as she saw the red wall. She remembered that she was to try to change the wall's color but awakened after having stared at the wall for several seconds. Three weeks later, she again reported having become lucid during her nightmare. D successfully closed her eyes and imagined the wall being white. Once she reopened her eyes she saw that the living room wall had in fact changed from deep red to white. At that point, she decided to leave the house and told one of the paramedics 'He's not really dead. It's just a dream', to which he replied 'I guess we should all get on with our lives then'. Once outside, D noticed that the ambulance was no longer there. She began to walk down her street and admired various cloud formations in the sky.

D stated that she was surprised by the fact that she was able to change this anxiety dream into such a pleasant one, especially the part with the clouds. She also reported that the experience had increased her self-confidence, and that she felt she had more control over her future than she had initially believed.

D was contacted for a 6-month and 1-year follow-up. On both occasions she reported neither a recurrence of her nightmare, nor any new anxiety dreams.

Case 5. E was a 42-year-old married man. He complained of nightmares in which he would lose control of his car while driving down steep mountain roads. Invariably, he would awaken as his car was about to crash or fall over a precipice. E had never driven on mountain roads in actual life nor had he ever been involved in a serious car accident. The nightmares were not recurrent in that the specific content of the nightmare would vary from one time to the next. For instance, he would lose control of his car for a variety of reasons including brake failure, coming to an unexpected hairpin turn, or while trying to avoid obstacles such as small animals or debris. E reported that the nightmares had begun in his mid-20s and that they occurred from 2 times a week to once every 2–3 months.

E recalled having had numerous flying dreams as a child. He decided that if he became lucid during his nightmare he would make his car fly over the mountains. He was instructed to form an association between driving in mountainous terrain and the fact that he was dreaming and to imagine himself saying the word 'Fly!' while driving down the mountains.

Two weeks after the session, E had a dream in which he was speeding down a long and twisty road when he had to avoid a large rock that had fallen onto his lane. Unlike his usual nightmares however, he was able to maneuver his car around the obstacle without losing control of his vehicle. A few days later, E dreamt that he was driving relatively slowly up a steep mountain road and became aware that he was dreaming. He then accelerated and when he reached the top of the mountain willfully drove his car off a cliff with the intention of making it fly. The car did not gain much altitude and soon began to fall towards a large body of water. However, E reported that he was not frightened and that the car dropped slowly and in a pleasant way. E also told himself that, since this was a dream, there was no reason why his car could not float on the water. Once the car hit the water, he pressed down on the accelerator and the car began to travel much like speed-boat gaining tremendous speed. E noted that this dream had been exhilarating. In the 4 weeks that followed this dream, the client had two lucid dreams, an uneventful dream in which he was driving in the countryside, and no nightmares or anxiety dreams.

Six months after the initial treatment session, E was still free of nightmares and continued to have an occasional lucid dream. These gains were maintained at 1-year and 18-month follow-up.

Discussion

The alleviation of recurrent nightmares in these 5 cases parallels the results reported by other authors who have used training in lucid dreaming to treat nightmares [18, 23–25]. Our results support the idea that treatments based on lucid dream induction can be of therapeutic value. Even in the 2 cases (i.e., B and C) where dream lucidity was not achieved, the subjects clearly incorporated elements from the lucidity rehearsal exercises into their nightmares with positive results.

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Several features of the treatment are noteworthy. Lucid dreaming allows the subject to interact wich the nightmare in a creative fashion *while in the dream*. As discussed by Tholey [18], the ability to become lucid in one's anxiety dreams can lead to important insights for both the client and the therapist. Though the treatment was originally designed for recurrent nightmares, cases 3 and 4 suggest that it can be used successfully in the treatment of nightmares with differing contents across occurrences. Finally, as was reported by D, dream lucidity can give rise to positive psychological elements which carry over into waking life. Similar effects have been reported by Tholey [18] and Brylowski [25].

Based on these and other case studies, it remains unclear whether the principal factor responsible for the alleviation of nighmares is lucidity itself, or the ability to alter some aspect of the dream. In the cases of B and C, remembering to perform a certain action in their nightmare resulted in a positive outcome. Though neither of them became lucid during their nightmare, elements from the training in lucid dreaming were clearly incorporated into the nightmare. One of the dreams reported by A raises a similar point. In this nonlucid dream, A felt that her hands contained some sort of magic or power, and successfully used this power to stop a train from hitting her brother. Conversely, both Halliday [24] and Zadra [35] have reported case studies in which lucidity without the element of control actually worsened the nightmare. Based on these cases, we suggest that a crucial aspect in the treatment of recurrent nightmares is the dreamer's ability to alter some detail in the otherwise repetitive dream. The client's ability to affect the nightmare's uncontrollability, either through new responses or altered expectations during the dream, may represent a key element in the elimination of nightmares. This reasoning agrees with Halliday's [24] suggestion that such case studies 'may imply that therapy should sometimes aim for control rather than just lucidity per se'. However, given the limited number of case studies that have appeared in the literature to date, an adequate understanding of the relative importance of dream lucidity versus dream control requires further investigation.

Although case studies can provide some information, what is clearly required are controlled treatment studies in which the therapeutic benefits of treatment elements can be separately evaluated. One study has shown that use of muscle testing ('psychological kinesiology') in guiding dream interpretation is effective in reducing the frequency of recurring dreams [36]. Similarly, five studies have demonstrated the effectiveness of cognitive-behavioral interventions such as relaxation, desensitization, and imagery rehearsal in the treatment of nightmares [15, 30–33]. However, in addition to data on nightmare frequency, it would be useful for future studies to evaluate pre- to posttreatment changes in the content of nightmares and related dreams. Such data may help clarify differential effects of these various treatment approaches. For instance, it is possible that these approaches alter different aspects of nightmare content such as the setting, emotional intensity, time of awakening, or the dreamer's response to the dream content. Miller and Dipilato [15] noted that some of their subjects reported a decrease in the frequency of their nightmares subsequent to treatment, but when the nightmares did occur, they were experienced as being more intense than prior to treatment. In addition, the authors noted that some of their successful clients reported dreams with content similar to that of their old nightmares, but were no longer calling such dreams 'nightmares'. It is possible that some treatments alter clients' conscious attitudes towards their nightmares rather than nightmare content per se. Objective dream content scales have been used successfully in the study of recurrent dreams and their relation to psychological well-being [37] and could be particularly useful in evaluating differential treatment effects. As discussed by Gottschalk [38], it also remains to be determined if, as a result of receiving treatment, clients actually stop having nightmares, continue to have nightmares but do not recall them, or intentionally suppress their reporting.

Finally, as noted by Kellner et al. [32], nonspecific factors such as disclosure, placebo effects, and exposure to the nightmares in the waking state may contribute to observed reductions in nightmare frequency and associated distress. Furthermore, there is some evidence to indicate that simply recording one's nightmares can lead to a decrease in nightmare frequency [31]. The relative importance of such factors and their mode of action in decreasing the frequency of nightmares remains unknown.

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